NIKON INC.
623 STEWART AVE
GARDEN CITY, NY 11530-4763
516-222-0200

TELEX: 967806

January 24,1985

To All Authorized Nikon Service Centers,

We would like to inform you that the shutter curtain blade replacement (For FM2, FE2 and FA) is available now as per technical information No. FM2-840024.

For your convience, we are enclosing two sets of shutter curtain blades each. (1B999-018 & 1B999-019) These sets are being sent to you at no charge.

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NILES, IL 60648
312-647-1075

NIKON INC.
501 FOLSOM ST.
SAN FRANCISCO, CA 94105
415-541-7406

NIKON INC.
1600 CORPORATE COURT
LAS COLINAS BUSINESS PARK
IRVING, TX 75038
214-659-9791

NIKON INC.
5355 OAKBROOK PARKWAY
NORCROSS, GA 30093
404-564-2156

NIKON INC.
804 LINCOLN CENTRE DR.
FOSTER CITY, CA 94404
415-571-8320

TECHNICAL INFORMATION

Product Name: Nikon FM2/FE2/FA

Repair manual

Ref. No. FM2-840024

Date: September 1984

Subject: SHUTTER IMPROVEMENTS

RP information list: No. 8431

Quite a few reports have been received on the breakdown of 1/4000 sec. shutter incorporated in the FM2, New FM2, FE2 and FA cameras. As the shutter curtains of 0.02mm in thickness travel across the aperture at approx. 3.3ms, their blades can suffer a large stress to get warped during the travel. To ensure the durability of performance, the shutter has been improved five times as follows.

1. Modification of inner aperture frame from July 1982

   The upper wind-side corner of the inner aperture frame has been re-contoured to prevent the interference with the edge of closing curtain that travels with shaking between the aperture frames. See Figure 1.

2. Modification of honeycomb structure from August 1982

   One part of the honeycomb structure has been changed to reinforce the blade of closing curtain. See Figures 2 and 3.

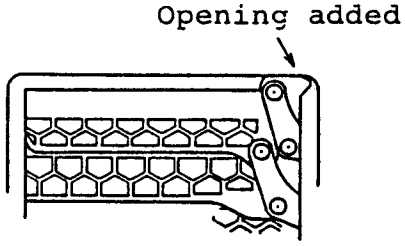

Figure 1

NIPPON KOGAKU K.K.
SERVICE DEPARTMENT
PHOTO PRODUCTS DIVISION
Fuji Bldg., 2-3, 3-chome, Marunouchi, Chiyoda-ku, Tokyo 100 Japan
Tel. (03) 214-5311. Telex: 02222950 (NIKON J) & J22601 (NIKON)

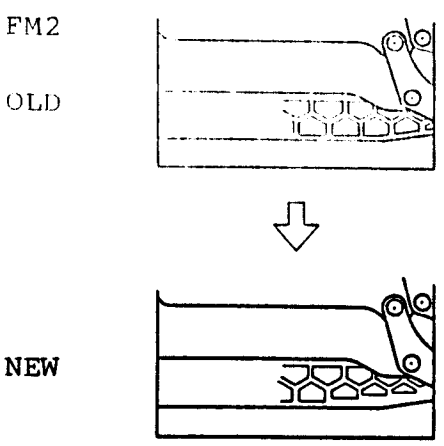

Figure 2

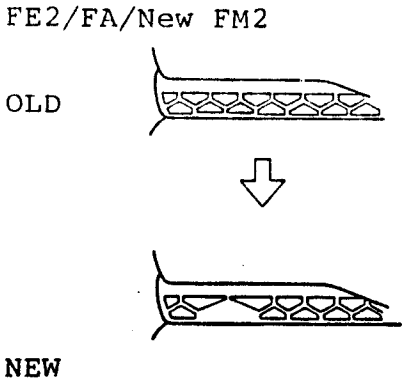

Figure 3

3. Change of material for closing curtain arm from February 1983

The material of closing curtain arm has been changed from titanium into carbon steel for reinforcement. See Figure 4.

4. Improvement of closing curtain brake from May 1983

A spring has been added to the closing curtain brake to increase the efficiency of braking. But this has not been applied to the former FM2 camera. See Figure 5.

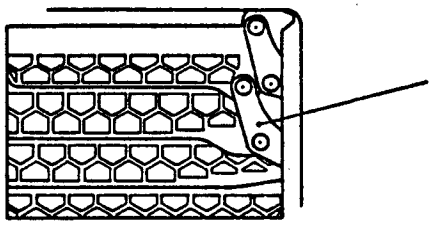

Figure 4

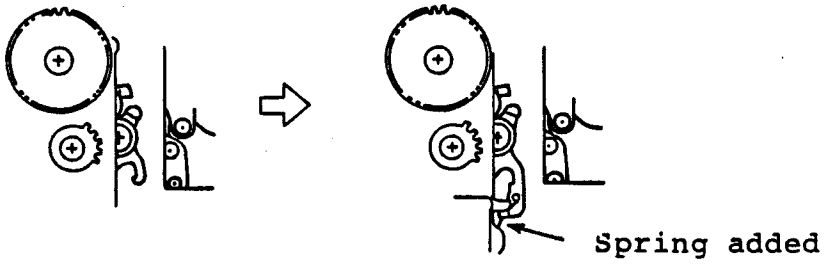

Figure 5

NIPPON KOGAKU K.K.

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Tel. (03) 214-5311. Telex: 02222950 (NIKON J) & J22601 (NIKON)

5. Modification of rivets securing the blades from December 1983

The rivets have been modified to prevent dislocation of shutter curtain blades. See Figure 6.

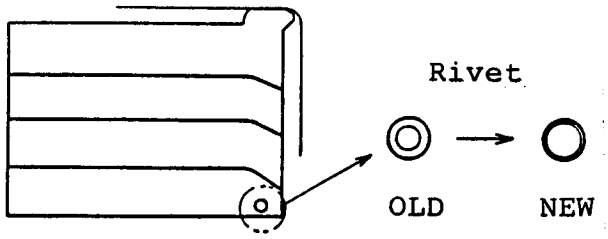

Figure 6

The above improvements have successfully leveraged the performance of 1/4000 sec. shutter for more than 100,000 shutter releases. But it is our judgement that, in most cases of the breakdown ever encountered, the shutter curtains may have been deformed by touching or probing with a photographer's finger. A customer education should be continuously given on the careful handling of the very thinnest shutter curtains.

SHUTTER CURTAIN BLADE REPLACEMENT AVAILABLE

To save the replacement of whole shutter unit even in the case of shutter curtain breakdown, spare curtains are made available now. When a camera is received for repairs, the shutter curtain blades can be replaced in accordance with the following procedures.

1. Check if the spare curtain blade is precisely flat, before installing.

2. See the illustration attached to disassemble/reassemble the shutter unit. The parts illustrated are of improvements. If a different pre-improved part is found in the unit of previous FM2 camera, it should be replaced in addition to the spare curtain blades. A junk shutter unit available should be disassembled to obtain the parts in need.

3. After reassembling, install the shutter unit in the camera body temporarily to check the shutter speed delivery. Set M250 when checking the FE2 and FA cameras.

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Cable: NIKKO TOKYO

4. Use a pencil to write the mark " Ⓡ " and the date of repair on the aperture plate. It will give a reference for future repair. See Figure 7.

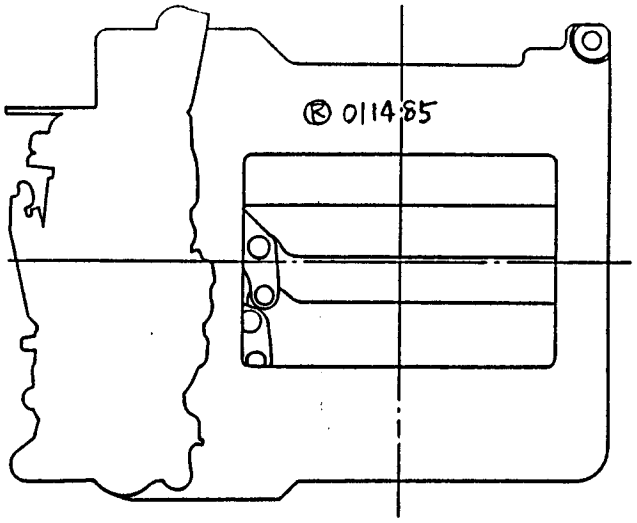

Figure 7.

PARTS ORDER REFERENCE

Product	Part Number	Name	FOB Price
Nikon FA	1B999-018	Opening shutter curtain	US$4.00
	1B999-019	Closing shutter curtain	4.00
Nikon FE2	1B999-018	Opening shutter curtain	4.00
	1B999-019	Closing shutter curtain	4.00
Nikon FM2	1B999-016	Opening shutter curtain	4.00
	1B999-017	Closing shutter curtain	4.00
New FM2	1B999-018	Opening shutter curtain	4.00
	1B999-019	Closing shutter curtain	4.00

It is desirable to replace both opening shutter curtain and closing shutter curtain at a time.

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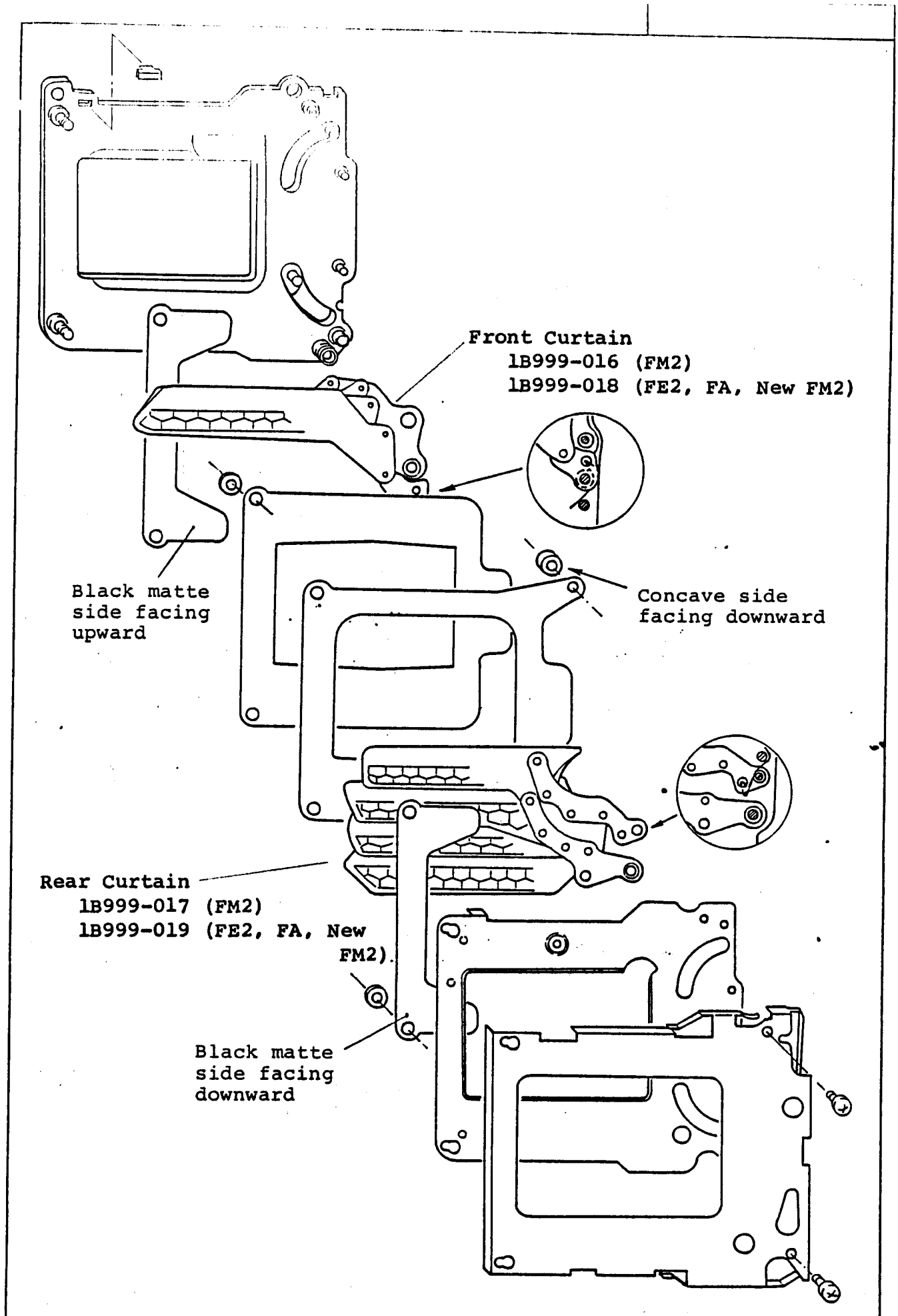
Front Curtain
1B999-016 (FM2)
1B999-018 (FE2, FA, New FM2)
Black matte side facing upward
Concave side facing downward
Rear Curtain
1B999-017 (FM2)
1B999-019 (FE2, FA, New FM2)
Black matte side facing downward

Nikon

CORPORATE HEADQUARTERS
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623 STEWART AVE
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DATE: May 3, 1982
NGC #0025-82

GENERAL INFORMATION

TO: ALL NIKON SERVICE REPRESENTATIVES

SUBJECT: NIKON FM2

We wish to advise you that an initial repair training for the new Nikon FM2 camera will not be made in any form of a training session. Since up to 60% of its architecture has succeeded that of the former model FM --- nearly 100% of the film-advance mechanism remains unchanged, it is our judgement that you will be able to conduct repairs of the FM2 without difficulties as long as you study it based on an idea of a camera as the FM's grade-up model. The repair manual will be forwarded to you under separate cover in the near future and we hope it could be helpful to you.

The FM2's main changed sections against the FM

1) Mechanisms/devices added to the FM's construction

a) Oscillation circuit allows the flash ready-light LED to blink and warn a shutter speed setting error when the Speed-light SB-15 is attached.

b) Meter hold circuit enables light pressure on shutter release button to switch and hold meter on for approx. 30 sec. after finger is taken off button.

c) Battery checker voltage will be changed depending on the temperatures so as to ensure proper use of a lithium battery of inferior low-temperature characteristics; ex. 2.34V at 25°C, 2.24V at 0°C, 2.16V at -20°C.

d) Shutter unit of a new development delivers the fastest speed of 1/4000 sec.

e) Functional gear installed on mirror box provides 10ms time-lag between mirror rise and opening shutter curtain travel in order to adjust timing of shutter release at 3.6ms curtains travel.

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f) Meter is automatically turned off when shutter speed dial is set at X200 or Bulb.

2) Modification of the FM's construction

a) Shutter speed dial is coupled to shutter unit through gears-train, instead of thread.

b) Main circuit board is installed on the top of pentagonal prism, instead of that of rewind shaft.

c) Mirror air-damper and shutter brake are eliminated through the introduction of new shutter unit and mirror box mechanism.

d) Multiple exposure lever is of the FE's type coupled to film-advance lever.

e) Focusing screen is to be removed and installed from mirror box space as that of the FE.

Shutter tester for 1/4000 sec. speed measurement

You will be able to employ the shutter tester, with which you have been measuring 1/1000 sec. and 1/2000 sec. speeds of the F2/F3, for measurement of 1/4000 sec. speed, although the tester should be set to check the vertical travel of the FM2's shutter. In case you will test if your shutter tester is applicable, you should gather actual readings through measurement of a sample camera to be verified against the specifications; when the data available are within the tolerance, there will be no virtual problem in using that shutter tester to service the FM2.

For your information, Nikon is using the Kyoritsu FS-502 shutter tester to check 1/4000 sec. shutter speed of the FM2. Information about purchasing this type of unit may be obtained from Copal of America.

In addition, please note that there is neither tool nor test equipment specially designed for repairs of the FM2.

Appreciating your kind understanding in this matter and cooperation to the efficient service on this new model, we remain

Yours very truly,

A. Arakawa
National Service Manager

TECHNICAL INFORMATION

Product Name: Nikon FE, FM2, FG

Modified From:

Ref. No. FE-840001

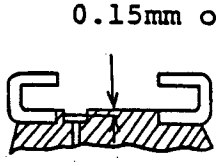
Date: April 1984

Subject: FLASH UNITS OF HIGH TERMINAL VOLTAGE MAY CAUSE DAMAGE TO CAMERA'S CIRCUITRY

Repair Manual:

It has been reported that a non-Nikon flash units of high terminal voltage may cause damage to the camera's IC circuitry due to accidental touch of the X contact with the camera's ready-light contact.

In order to prevent this trouble, the ready-light contact has been countersunk 0.15mm or more from the suface of accessory shoe.



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